

TAB XII

## LICENSING INTELLECTUAL PROPERTY

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## LICENSING INTELLECTUAL PROPERTY

### Introduction

The presence of a strong intellectual property protection system covering patents, trademarks, copyrights, and trade secrets in the United States (and many other countries) is a major stimulus to the creation of intellectual property and the wealth generated from its exploitation.

Having created an environment that nourishes R&D and gives patent rights to investors and the right to exploit these rights to sponsors of invention, it is not surprising that licensing intellectual property rights is important to individuals, companies, and countries.

The premise is that having spent the money, having made the investment, the patent rights will be used by the owner, by a licensee, or by both. It is also true that, on occasion, they will be misappropriated by unlicensed parties.

Over the past twenty years, the business environment has changed dramatically. The forces of change today are stronger than ever — and that includes rapid technological change.

There is no doubt that technology licensing has become an enormous business. Along with the growth of business has come a growth in litigation. Will business men and women give as serious consideration to initiating a million dollar litigation as they do to a million dollar R&D project or a million dollar capital project? When concern for litigation expense and resource consumption finally attracts shareholder attention, licensing will continue to grow even more rapidly.

Rapid change is difficult to deal with. It is hard to make predictions and forecasts. The result is an uncertain time and this is exacerbated by the reorganization of the corporate world, and is a time of personal and corporate anxiety and stress. As things move quickly, it becomes hard to make decisions on what is right and what is wrong.

There will be more, not less, differences of opinion — read disputes — as to what the agreement meant, who owns what in the spin-off or start-up, and what rights does the ex-employee inventor have, etc.

A challenging future in the business of licensing awaits us.

The acquisition of property rights in technology of any kind in the form of patents, trade secrets, or copyrights in the case of computer related technologies, is not an end game in and of itself. The ultimate objective of the owner of such rights is to exploit them for direct financial gain or to further other business objectives in a manner which maximizes their value. The easiest way to do this, and which brings the greatest reward but is attended with the greatest risk, is for the owner to directly exploit the technology. Providing a product or service that falls within the scope of the patent or which in some way takes advantage of the trade secret are the most common examples of this strategy.

There will be situations in which direct exploitation of proprietary technology is not an option as this may not be a part of the owner's business strategy. A product might address a market too small to be interesting to a large company or too large for a small company. Some large pharmaceutical companies will not undertake development of a drug otherwise safe and effective if its market potential is less than about \$100 million annually. A small company may lack the resources or be unwilling to develop and then build the manufacturing capability and marketing and sales force required to exploit a major drug. A university is typically completely without resources to exploit the technology it develops. In some instances, the use of the technology may be blocked by patents owned by another party or, even if not blocked, the technology is not commercially viable unless combined with a that of a third party.

In order to exploit proprietary technology, the owner will be motivated to enter into a transaction which includes as a part thereof a transfer of technology. A number of business relationships are available in these circumstances where the owner of technology is unwilling or unable to directly exploit proprietary technology. It can be sold or licensed to others.

Purchase or license transactions probably comprise the majority of agreements through which the owners of technology exploit their technology when direct exploitation is not the route chosen as they are low risk to the owner of the technology as the risk of development, manufacture and commercialization are transferred to the purchaser or licensee, at the risk of a lower financial return direct exploitation by the owner. Increasingly, more sophisticated, and typically more complex, strategies are being pursued in order to capture more of the potential of

proprietary technology for its owner. These strategies demand assumption of greater risk on the part of the owner of the technology.

### Overview of Licensing

Any discussion of the strategies for exploiting technology which include technology transfer must begin with the two most basic tools by which such transfers are done. Those tools are the assignment and license agreements. These two kinds of agreements are distinguished from each other in that an assignment conveys the right to exploit technology by a transfer of an ownership interest in the technology whereas a license agreement conveys a right to exploit technology without transferring any ownership interest.

An assignment can involve a transfer of all ownership interest or some lesser right such as a divided or undivided interest. Section 35 USC 261 of the patent statute specifically authorizes the division of the patentee's interest as well as the geographical division of patent rights. Assignments of rights in technology are usually for a fixed fee, which may be paid in installments, although payments in the form of a royalty based on use of the transferred technology are sometimes required.

The essential characteristic of a license agreement that differentiates it from an assignment is that it transfers the right to use the technology without transferring ownership therein. The rights transferred by license can be non-exclusive, reserving to the owner the right to exploit the technology by offering licenses to others. Alternatively, the rights transferred can be exclusive with a reservation in the owner of the right to exploit the technology or exclusive even as to the owner. While the consideration for a license can be a fixed fee, which may be payable in installments, it more typically takes the form of a royalty payment based on actual commercial use of the licensed technology, e.g., a royalty based on sales or profits, units produced, raw material consumed, savings involved, or any other convenient measure of use for the technology involved.

When the technology is patented, a non-exclusive license is treated as merely a covenant not to sue the licensee for acts which would otherwise constitute infringement. Such license is usually not accompanied with a right to grant sublicenses, but typically is one which can be transferred with a sale of the business to which it pertains or to the surviving entity in a merger or acquisition in which the licensee disappears.

An exclusive license, usually carries with it the right to grant sublicenses in order for the licensee to exploit the technology to the maximum extent possible. It is not usually extinguished by sale of the business to which the license pertains or in a merger or acquisition. Unlike a non-exclusive license which merely protects the licensee from suit, an exclusive license usually carries with it an implied obligation on the part of the licensee to diligently exploit the technology licensed unless the license is acquired for a fixed fee. This obligation is not extinguished in the circumstance where the licensee is obliged to pay a minimum royalty, at least when the licensee retains the right to terminate the license if the minimum payment is not met.

Since the level of effort required when the obligation of diligent exploitation is implied will likely be disputed by the parties, license agreements are drafted so as to set forth objective benchmarks which must be met, and if met, constitute diligent exploitation. Such benchmarks can include specific amounts of money to be spent in developing, marketing and/or selling a product; size of sales force; achievement of defined objectives by a specified time or the like.

Many different business objectives can be accomplished by either an assignment or a license agreement, and the form and language of such agreements will matter substantively. For example, subtle differences between agreements can affect the tax treatment accorded income received by the transferor or how costs can be treated by the licensee. In crafting an agreement it is frequently advisable to discuss the form of the agreement with accountants and tax lawyers when particular tax treatment is desired. If the licensor wishes to obtain capital gains treatment on proceeds, then an assignment or exclusive license is necessary. However, in either an exclusive license or an assignment, retention of certain rights may defeat this expectation. For example, income from transfer of geographical rights and field of use rights by assignment or exclusive license does not qualify for capital gains treatment since neither constitutes a transfer of "all substantial rights" under the patent within the meaning of Section 1235 of the Internal Revenue Code.

The nature of the agreement may also determine whether the transferee must capitalize the costs of acquisition of the technology and amortize those costs over a period of years or immediately expense the costs on the profit and loss statement. Specialists in the tax area should be consulted.

### Exclusive vs. Non-exclusive Licensing

When the decision is made to license rights in technology, usually consideration is given to whether those rights should be granted on an exclusive basis, with or without rights retained by the licensor, or non-exclusively, and whether the rights should be parceled out on a territorial, field of use or other limiting basis.

The objective in determining the strategy to be followed for exploiting technology is to maximize value of the asset to its owner. That objective should, therefore, dictate whether exclusive or non-exclusive rights, with or without field of use or other restrictions, are to be granted. Exclusive licenses usually command higher royalties than do non-exclusive licenses since they eliminate the possibility of competition based on the licensed technology. Exclusive licenses require that the licensor place the fate of the technology in the hands of a single exploiter. This increases the risk that the licensed technology will not be successfully developed. Thus, as a measure of protection to the licensor, exclusive licenses are best crafted by including provision for the licensor to terminate the agreement if defined objectives are not met, for example, minimum royalties, missed stages in introducing the product or services into the market place, etc.

The principal consideration in determining the scope of the license, other than what the licensee is willing to pay, is whether the licensee can fully exploit the rights granted. If it can, then an exclusive license will bring the greatest return. Without exclusivity there may be insufficient economic interest in the technology being licensed for a non-exclusive licensee to exploit, or to aggressively pursue it.

Exclusivity is particularly relevant in the pharmaceutical industry. The first company to register a drug for marketing purposes must demonstrate to the satisfaction of the U.S. Food and Drug Administration that it is both safe and effective for its intended purpose. Estimates of the average cost of bringing a drug from the research phase to FDA approval for registration often exceed \$100 million. Therefore, the successful registrant must be able to charge enough for the drug to recoup the large investment in the approval process, cover the costs of those projects which do not result in marketing approvals, and most do not, and earn a respectable return for shareholders. The second comer need, however, only establish that its drug is substantially equivalent to the already-registered product, a much lower threshold to obtaining marketing approval. Accordingly, without the offer of exclusivity, there may be no takers for a license even if the royalties or other consideration sought is low by industry standards.

Pursuing a strategy of non-exclusive licensing is indicated when exclusivity is not of great value to the licensee, i.e., he himself will not be a participant, or where a single licensee is incapable of exploiting the technology. Examples in support of non-exclusive licensing would be the situation where the licensor enjoys a dominant market position unlikely to be significantly enhanced by an exclusive license or affected by licensed competitors. Also the licensee may enjoy a substantial proprietary position of its own which is only modestly improved by the licensed technology.

The situation where a policy of exclusively licensing technology would probably not have been ideal because a single entity could not have fully exploited the technology's potential is illustrated by the decision of the University of California and Stanford University (in Genentech) to license basic patents co-owned by them for producing proteins using genetic engineering techniques. Among the pharmaceutical products already on the market based on this technology are human insulin, human growth hormone, tissue plasminogen activator, various interferons, erythropoietin, a number of growth factors and interleukins. These and other products based on the patented technology were developed by numerous companies and have actual and projected sales in the billions of dollars. Many companies use the technology in various research projects to develop further products. No single company would have been able to achieve this level of exploitation of the technology under an exclusive license. While an exclusive licensee could have kept some rights for itself and sublicensed others it is doubtful that any single licensee would have had the foresight to allocate rights to the technology as efficiently as the market for non-exclusive rights has been able to.

#### License Restrictions Field of Use

Similar considerations underlie the determination to parcel out technology on a field of use or other basis which restricts the licensee to less than all of the potential applications of proprietary technology. For example, an improvement in diesel engine technology could be licensed on a non-exclusive basis or it could be apportioned among manufacturers of truck power plants, locomotive engines and construction equipment if the industry is organized along such lines and within those fields on an exclusive basis if the market for the technology demands it.

#### Territorial Restrictions

Territorial restrictions make most sense when the market is made up of small regional players or when the licensee wishes to retain a section of the world or

national market for itself but lacks the resources to enter all available regional markets. Within territories, the rights allocated can be exclusive or non-exclusive depending upon the nature of the territorial market.

### Changes in Business

According to a recent study, there were approximately 1,300 biotechnology firms at midyear 1993. Of these, only about 235 had shares trading on an exchange, the remainder were principally venture capital backed companies with very small cash balances. A key problem facing most of these companies, even those publicly traded, is that they lack the capital to fully exploit their technologies.

The capital markets can only satisfy a portion of the requirements for funding necessary to pursue all the product opportunities the small companies have. The capital markets dried up after 1992 and while it returned, there were shifts in the technology the market was interested in. Now, most companies pursue the large, cash rich companies in the United States, Japan and Europe in order to obtain the funds needed for development of products for which company capital is not available or cannot be justified.

### Sponsored Research and Development

There is no single strategy for accessing sources of financing by small companies. Rather than merely licensing a portion of their technology for cash to spend on the research and development programs retained for exploitation by the company, the usual course taken by the cash poor but technology rich companies is to contract to carry out the research and development on behalf of the large company directed to products to be sold under exclusive license by the large company. There are good reasons for both companies for this kind of agreement rather than a straight license agreement where cash is traded for rights.

While simple license agreements are often accompanied by both an up-front payment and a right to receive royalties, these kinds of payments are not ideal for cash poor companies. The up-front payment a licensee is willing to pay, particularly on high risk technology, is not enough to carry the company for long and royalties are too far in the future to be of any help in meeting current cash needs. Payments for research and development, even if done at cost, allow the company to build its scientific and management staff and physical plant at a faster rate than would be possible if their own capital is expended for these purposes. There may also be synergies between the

sponsored program and other company programs which increase the likelihood of success of both activities. Typically, these agreements establish research and development milestones which when met earn bonus payments for the licensee which become more generous as the product under development nears the market. Finally, a successful product can earn considerate royalties.

However, the small company may have difficulty in managing the rapid growth in personnel and facilities which may be necessary to carry out a large sponsored project. This can hurt the company's other programs which are its key to long term success. Sooner or later the company must directly shoulder the personnel and facilities costs borne by its present partner under the sponsored research and development agreement. This risk is greatest when the research is in its early stage. If the sponsor partner abandons the project, as most contracts provide it may do, the company will be saddled with employees it may not be able to pay and facilities beyond the needs of its own programs. Therefore, a sponsored research and development agreement should include an obligation on the sponsor's part to carry the personnel and facilities cost for a period of a least six months to permit the company to wind down the project, at least in those circumstances where termination is not based on breach.

For the sponsor, a sponsored program also has advantages and risks. Among the advantages over a simple license of technology are that the project will likely get off to a much faster start if left in the hands of its originators. Transfer of the technology to the licensee is always accompanied by some delay. The company also avoids the necessity of recruiting scientists and allocating facilities to the project which must be absorbed if the project fails. The cost of research at a small company is sometimes less than would be incurred by the sponsoring company which is an advantage, but then the licensee's risks include poor management of the project by its licensor partner which can increase costs or lead to failure. It must also pay royalties on the products successfully developed which reduces any profits ultimately realized.

In order to maximize any gain to be realized under sponsored research agreements, the technology rich company often looks offshore for a sponsor. Partnership with a Japanese company has been particularly popular. Often such an agreement permits the U.S. company to keep the U.S. market for itself, something a U.S. partner would never accept. The Japanese partner in turn is almost always given exclusive rights in Japan and other markets where it has a strong position. Europe is sometimes an area in which the partners agree to co-market the products under development. Each partner then pays the other a royalty on its sales. Agreements having a market sharing component commit the U.S. company to a larger financial

burden than when its sponsor receives worldwide rights since it usually must bear a portion of at least the clinical development of the products. Accordingly, its risks are higher but the ultimate reward will obviously be greater.

Another provision popular in sponsored research agreements is for the sponsor to also purchase stock in the small company in addition to funding the small company's research and development. The contribution to the equity of the smaller company is not volunteered since the large companies do not see themselves as being in business to become investors in other companies. They would much rather spend their money in other ways. The smaller company benefits, however, by having an infusion of cash it can spend on its own programs. The stock market also views such transactions as an endorsement of the company's management and technology. The major benefit to the funding partner of such an equity transaction is that it offers some upside potential if the small company succeeds even if the specific project fails. In addition, it is usually rewarded by receiving a lower downstream royalty if the project is successful than would have been the case without the purchase of stock.

Another aspect of the sponsored RED agreements is providing for the small company to manufacture the products, if successfully developed. This permits the small company to gain experience and build facilities for manufacturing earlier and/or beyond which its own programs will allow. Problems arising here include determining the transfer pricing for the product. While the funding partner is relieved of the manufacturing burden, it commits more of the responsibility for success of the project to its smaller partner.

#### Distribution and Manufacturing Agreements

Earlier it was pointed out that inadequate resources are a major impediment for the technology owner to proceeding alone. The inadequacy may be financial and/or structural. However, in some cases licensing of proprietary technology, with or without research and development support, because of a lack of adequate resources may not be the best strategy to be pursued.

A strategy which has proved successful and is used by companies, particularly those engaged in the development of products potentially useful in a number of market niches beyond the ability of the small company to reach because of too small or nonexistent marketing and sales organizations, has been to go beyond research and development and to also manufacture the products. The small companies however,

often stop short of building a sales force to address all possible markets and instead enter into distribution agreements for access to the market.

Diagnostic products for the medical field can sometimes be found in as many as five different market settings, (i) the hospital laboratory, (ii) the small reference laboratory to which doctors send specimens, (iii) the high volume national or regional laboratory, (iv) the doctor's office itself and (v) the over-the-counter market in the local pharmacy. Entering all of these markets would require a sales force beyond the means of most large companies and would exceed the resources of a small company. The company might however have, or be able to build, the capability to manufacture products for all of these outlets. Incurring the obligation to manufacture products permits the company to earn a manufacturer's profit on sales to its distributors which offers the company an opportunity to earn greater profits than a royalty under a license would provide, but at a greater risk.

Distribution agreements take several forms. One form is to engage distributors on a non-exclusive basis. This leads to competition between distributors and results in lower prices which, in turn, puts pressure on the transfer price the manufacturer can charge its distributors. Accordingly, the usual approach has been to appoint exclusive distributors for some or all of the market niches in which a product can be sold. This eliminates competition at the retail level and gives greater pricing flexibility to both the manufacturer and distributor. The manufacturer can increase its price to whatever level the distributor can pass on to its customer at a profit margin acceptable to it, maximizing the profit of both. Success of the product however is placed in the hands of a single entity increasing the risk of failure.

A variation of the usual manufacturer/distributor relationship which has become popular is a hybrid between the sponsored research and development agreement and the distribution agreement. In this form of agreement, a company with a large market presence, and usually cash rich, will underwrite the development of a product by the small and cash poor company which incorporates proprietary technology of the cash poor company. Instead of merely developing the product and licensing its manufacture, use and sale to its sponsoring partner in return for a royalty, the developer retains the right to manufacture the product. Difficulty is usually encountered in such agreements in arriving at a mutual satisfactory scheme for fixing the transfer price of the product to the distributor. Possible schemes include the following:

- (a) the manufacturer sells to the distributor at a prearranged price;
- (b) the manufacturer is guaranteed a profit on sale of product to the distributor, e.g., cost of manufacture plus an agreed profit margin;
- (c) the manufacturer earns a profit as in (b) plus a royalty on sales;
- (d) the manufacturer transfers product to the distributor at the cost of manufacture and receives a royalty on sales, usually higher than royalty in (c); and
- (e) the manufacturer transfers at cost as in (d) and shares in the profit earned by the distributor.

Each of these schemes has advantages and disadvantages for both parties. The first has the disadvantage that it is difficult for the manufacturer to predict its cost of manufacture when the product is under development and, therefore, that the prearranged price will earn it a profit. The distributor cannot be sure the market will be such that it can compete on the basis of the prearranged transfer price. Agreements under which the product is to be priced based on cost of manufacture do not provide an incentive for the manufacturing party to minimize its costs. In fact, its incentive is to maximize cost because this maximizes profit. The manner in which the cost of manufacture is to be calculated is, therefore, usually the subject of negotiation. Scheme (e) is attractive to the manufacturer because a share of the profits can provide a greater return than a royalty on sales if the profit margins are high. This requires careful negotiation of how the distributor calculates selling expenses to be applied against gross sales in arriving at the profit earned on the distributor's sales to be shared with the manufacturer. The seller's incentive is to allocate as much selling expense as possible to the distributed product.

In order to provide incentives for the manufacturer to reduce manufacturing costs, a number of alternatives are available. For example, if the agreement provides for a transfer price of cost plus 50%, reductions in cost will yield a lower profit for the manufacturer. Therefore, the parties often provide for an increase in the profit margin as manufacturing costs go down in a manner that increases the profit to the manufacturer even as the price is reduced to the distributor. To guard against the possibility in scheme (e) that selling expenses will eat up the profits, the parties usually agree that the amount to be earned by the manufacturer will be the greater of an earned royalty or a share of the profits.

## Joint Venture

Another strategy for exploiting technology in addition to licensing and distribution agreements is the joint venture. A joint venture involves creation of a new enterprise jointly owned by at least two other partners that share in the profits or losses of the enterprise. They share profits and losses equally. A usual motivation for creation of a joint venture is to exploit each party's technical or financial resources in a manner neither can do alone. For example, both parties may license complementary technologies to the enterprise and fund equally its research and development activity. The new venture will frequently establish its own sales and marketing organization and may manufacture products of the venture in its own facilities. In other instances, some or all of these activities are provided to the venture by the partners under a contract with the venture.

While the joint venture permits the combining of complementary resources and spreads the risk of failure over at least two partners, the profit potential for each partner is obviously less than would be realized by their proceeding alone. A problem that frequently arises in the joint venture is that of jointly managing the enterprise and providing for its windup. As a result, joint venture agreements are very complex and the opportunity for disagreement high.

Joint ventures are best suited to companies with substantial financial as well as technology resources since they usually require that each fund the enterprise until it is profitable. As a result, they are not a desirable structure for early stage, unprofitable companies, the typical profile of a startup. Such companies do not have cash that can be set aside to carry their share of the joint venture expenses and may not be able to raise the necessary funds when a capital call is made. Therefore, they are frequently reluctant to enter into such ventures.

Structurally a joint venture involves the following: Each of Company A and Company B form a wholly owned subsidiary. The two subsidiary companies then form a general partnership in which each owns an equal interest. The two parent companies license technology to the joint venture and commit equally to sharing in the research and development costs through payments through their subsidiaries. The joint venture contracts with the parent companies for research and development services.

As part of the transaction, Company A makes a substantial equity investment in Company B through its subsidiary. This gives Company B greater operating capital and increases its ability to fund research and development beyond its

initial commitment. The overall agreement also contains provisions which increase the opportunity for Company B to share in the success of the joint venture. Thus, as products enter the development pipeline, either a party can pay its shares of those costs as they come due or opt out and permit the other party to develop the product alone. When both parties share the cost of a product's development, they share profits equally. If a party does drop out, it receives a royalty on the other party's sales of a successfully developed product in return for its contribution of technology to the venture and its financial support of early stage research and development represented by the commitment. The company which opted out of the development effort for a product can buy back in at a later date by reimbursing the partner that continued development for half of its expenditures plus interest. This flexibility increases the likelihood that the financially weaker partner will be able to realize the opportunity for profit sharing that motivated it to enter into the joint venture in the first place.

Another form of joint venture between a startup company and a large company is where both are committed to the joint development of certain products to be co-promoted by the partners. The agreement provides that each will fund 50% of product development costs. In recognition of the smaller company's limited resources, an arrangement is arrived at under which, at the smaller company's option, the large company will fund development beyond the smaller company's cash means. The smaller company can retain its right to share in the profits on a product by reimbursing the large company for its share of the development expense in two ways. It can either transfer the smaller company common stock to the large company having a value equal to the smaller company's obligation or permit the large company to deduct the smaller company's obligation from sales which otherwise would be shared with the small company. The objective is to provide a mechanism for the cash poor company to prosper in the venture.

#### Research and Development Partnerships and SWORDS

The basis for exploiting technology is that the financial return from the exploitation of technology is proportional to the risk taken. Licensing or sale of technology is low risk with relatively low return. Proceeding on its own, on the other hand, commits an enterprise to spend its own money and bear all risk of failure but then, it does get to retain all of the profits of that effort if the product is successful. The problem for most companies has been how to raise the money to permit it to go forward on a wide front. Licensing agreements, sponsored research, distribution agreements and joint ventures have become common vehicles for transferring some of the cost and risk of failure in technology exploitation to others at the expense of some of the benefit

which would have resulted from operating independently. New strategies have been arrived at which make it possible for cash poor companies to operate independently. The mechanisms used are the R and D partnership and SWORDS (Stock-Warrant-Off Balance Sheet-Research-Development Company).

### R and D Partnerships

The technology rich, cash poor company (Company A) establishes a wholly owned subsidiary (Company B) to carry out research and development in a defined field. Company A exclusively licenses its technology to Company B in the field where Company A is to be active. Company B in turn contracts with Company A to actually carry out the research and development on its behalf. Company B then forms a partnership in which it is the general partner in association with a number of limited partners who actually fund Company B's research and development activity. Investment banking firms then undertake to sell the limited partnership interests on behalf of Company B and negotiate with Company A on behalf of the partnership before the limited partnership interests are actually sold. The partnership actually takes title to the technology developed on its behalf by Company A. Ownership of this technology by the partnership is a key aspect of the arrangement since it permits the partnership to gain certain tax advantages.

In view of the license to Company B and the partnership's ownership of the new technology, the arrangement facilitates a go it alone strategy for Company A because as part of the overall agreement, Company A is granted the right to purchase from the partnership the technology it developed on behalf of the partnership, typically for a fixed fee and a royalty on product sales based on that development. However, if Company A does not exercise the option, the partnership is free to exploit the technology in anyway that it can.

The advantages to Company A are that the costs of product development as financed by the partnership do not affect its balance sheet, i.e., it does not expend its own cash, Company B's cash is expended instead. Company A also earns contract revenues which permit it to expand its personnel and infrastructure and realize the advantages this situation provides. As a result, Company A's profit and loss statement looks better. The risk of failure in the defined area is largely borne by the limited partners. Finally, if the project is successful, Company A can purchase the rights to it, incorporate that technology into its business and earn profits on sales if products result, subject only to the royalty obligation to the limited partners.

If the project is successful, the partners earn the fixed fee and royalty payments. Later partnerships are given additional sweeteners, such as a warrant to purchase Company A stock at a fixed price over a term of years. Thus, if Company A is a successful enterprise, the warrant can be exercised to purchase the stock at a favorable price and provide a return on the investment even if the partnership funded research and development effort failed or was only modestly successful.

A major attraction of R and D partnerships in their early days was generous tax incentives. Losses by the partnership for tax purposes were large. It paid for research and development but had no revenues. These losses could be written off by the individual partners against their ordinary income. These tax incentives have been eroded, however, by restricting the write off of partnership losses to so-called passive income, i.e., income from dividends, interest, etc. Only very high net worth individuals have enough passive income to make such partnerships attractive. As a result, the R and D partnership has fallen out of favor as a financing vehicle. However, they continue to be done.

### SWORDs

Another disincentive to R and D partnerships has been the lack of liquidity of a partnership interest. If a limited partner needs cash, he finds it difficult to sell his interest. To get around this and other limitations of the R and D partnership, the SWORD has been devised. The technology rich company (Company A) again sets up a subsidiary (Company B) to conduct research in a defined area. Company A exclusively licenses to Company B the technology to be exploited in the defined area and Company B contracts with Company A to carry out the actual research and development.

Up to this point then, R and D partnerships and SWORDs are the same. The difference between them is in how the money is raised. Instead of Company B raising money by forming a partnership with investors who hold a limited partnership interest, Company B sells stock to the public in an underwritten public offering. The offering is typically a "unit" offering that includes both a share of callable common stock in Company B and a warrant to purchase a share(s) of stock in Company A for a fixed price over a term of years. The warrant feature is offered as a sweetener just as in the R and D partnership format. Company A is granted an option to purchase the stock of Company B at a predetermined price which, if exercised, will provide the investors with a premium over what they paid. SWORDs done in the recent past have required

premiums equivalent to a 20-30% annually compounded rate of return. Company A usually has the option to exercise the option with either cash or shares of its stock.

The exercise price of the warrant is a key element of the SWORD unit. Usually it is at a price in the range from 100 - 130% of the trading price of Company A when the transaction closes and is exercisable for up to five years. Some SWORDS provide a second warrant to the investors to purchase Company A stock exercisable in the situation where Company A does not exercise its option to purchase Company B's stock. This gives the investors an additional hedge against losses if Company B is unsuccessful.

At some point after the purchase of the unit, the warrant and the callable share of Company B common stock are separated and both trade in a public market such as that provided by an exchange or NASDAQ. The major advantage over the R and D partnership of a SWORD investment lies in its liquidity for investors since the original unit and, after separation, the Company B share and Company A warrant are tradeable on an exchange like any other registered security. Company A still gets to finance research and development off its balance sheet and earn contract revenues just as in an R and D partnership structure and the risk of failure of the research and development activity is borne by the Company B shareholders.

A drawback to R and D partnerships and SWORDS from the point of view of the company that establishes them is their complexity. Company B has a separate board and must be operated as a separate entity. The potential for conflicts of interest to arise between Company A and Company B is high. There is also great potential for lawsuits between the investors and the organizing company, particularly if the funded project fails and the technology purchase option is not exercised. The benefit, however, is that these partnerships permit the cash poor company to operate independently permitting all rights to a successful product to be obtained by a cash poor company, subject only to the payments required for repurchase of the rights.

#### Defining A Licensing Strategy

In the situation where a company elects to license technology a great deal of preparation should be undertaken in order to arrive at the actual licensing strategy that will be pursued before negotiations begin. Some of the considerations that could be part of that process include:

1. Evaluation of the overall business opportunity. Company management must take a hard look at the company's technology base and determine what submarkets of the relevant business area it could address. These markets are then further evaluated in light of at least the following:

(a) market size today and future projections based on demographics, market trends, government policies affecting the market and the like;

(b) the projected cost of product development in the various submarkets;

(c) the marketing and sales force required to commercialize the product in the submarkets, e.g., is the market for it large or small; is it diffuse or compact;

(d) the nature of the competition and the competitive edge, if any, afforded by the technology. This requires looking at existing products and products in other companies' pipelines;

(e) the relative value of the company's proprietary position in the market being considered; and

(f) state of the capital market and the ability of the company to raise money in that market.

2. Determining what to license. Based on the above evaluations, the company creates a business plan which identifies the technological opportunities it will keep for itself and those it will attempt to exploit with partners. Generally, the company wants to retain for itself product opportunities which require a relatively small sales force and to seek partners in large size markets.

As part of that plan, the company will focus on partnerships which include a sponsored research effort. As the company is willing to license a part of its technology, it wants to couple that license with a research and development contract which will permit it to grow its scientific staff and physical plant with the synergy created by having more programs than it can support with its own funds. This outweighs the risk that it could not absorb the employees and facilities into new programs when the R and D contract expires. Such programs are also seen by the

investment community as endorsements of the company's technology and management and enhance the company's image in the capital markets.

3. Profiling the partner. Having decided to license and how it wishes to do so, the company can look for partners based on an evaluation of such companies as potential partners, including the following factors:

(a) relationship between the offered technology and the markets known to be of interest to the potential partner;

(b) the potential partner's record and reputation in collaborative agreements with other small companies;

(c) whether the offered technology would likely compete with internal efforts of the potential partner; and

(d) the potential partner's success in bringing new products to market and other aspects of its commercial experience which differentiate it from other companies.

In crafting the initial proposal, the company should prepare an outline of the structure of the deal it hopes to achieve. This is largely the results of an effort to identify the financial and other benefits it hopes to receive in light of the technology it would give up and the benefits it believes it will confer on the partner.

It will probably result in a decision that long term benefits in the form of high royalty payments can be traded for immediate and near term economic benefits since the most optimistic projections are probably that royalties would not begin to be paid for some time. The benefits to be sought include the following:

1. reimbursement of fully burdened research and development expenses;

2. purchase of specialized capital equipment with a mechanism for the company to acquire title when the program has ended;

3. milestone payments based on achieving research and development targets by the company;

4. milestone payments based on development targets achieved by the partner; and
5. purchase of equity by the partner.

These benefits are important to the small company, as it is relatively cash poor and the capital markets technology stocks are volatile. Cash is needed for current operations, for growth needed for current operations and to fund growth in research and development capability. Infusions of equity and other early cash payments like those for reaching a milestone can be used to offset the cost of other programs.

Milestone payments based on the company's success are also of benefit to the partner, as often a licensor asks for, in addition to royalties, a large up-front payment in the form of a licensing or technology transfer fee as compensation for the value of the technology at the time of transfer. For technology on or near to market, this value can be easily determined, but it is much more difficult if the technology is in an early stage of development. Milestone payments are a way of recognizing the value of licensed technology as that value is proven rather than on a speculative basis. Furthermore, milestones payments are only payable where there is success. An up-front payment, on the other hand, must be written off if the technology fails. Provisions for milestone payments can reduce drawn out discussions over the level of payments intended to reflect the value of the technology in the early stage of development at the time of technology transfer discussions and permit some cash outlays to be deferred even if not avoided. It is easier to pay out large sums as milestones are reached than hand out cash up front. Payments based on milestones achieved by the partner are justified because their achievement also reflects the true value of the underlying licensed technology. The purchase of equity can be offered as a basis for lower royalty payments and to cushion the downside of failure of the sponsored research and development.

#### Negotiating The Agreement

The best plans for exploiting technology will come to nothing if an agreement cannot be reached. Negotiation is truly an art and like any such endeavor there are many styles and very different styles can be equally successful.

1. Be well prepared. The negotiations easiest to conclude are those in which each party has a well thought out position. Those who have negotiated with Japanese companies are always impressed with their preparation. If you are a small company negotiating with a large company, you can get pushed around a bit. One way

to prepare for such negotiations, if the large company has a history of dealing with publicly traded small companies, is to obtain copies of its agreements with other small companies from the SEC and study them for insights they offer into what the large company likely to find acceptable.

2. Avoid "negotiating" with someone who cannot make the deal. Early in the negotiations try to establish if your counterpart actually has deal making authority. Once you concede a position in negotiations you usually cannot get it back. Therefore, if you and your counterpart appear to have struck a deal in which you have offered compromises and he comes back with the message that his boss would not accept it unless changed in certain ways, you will find it difficult to condition giving in on some or all of those points if your counterpart will give back in other areas. He will again have to take the deal back to the boss. Shuttle negotiating becomes the process in such a situation and often leads to a breakdown in negotiations.

Negotiating with someone who cannot actually make the deal also can create false optimism. A large number of "deals" negotiated at great expense are not finally concluded because there really never was a deal that could be made on terms acceptable to both parties.

3. A letter of intent almost always slows the process down. Many businessmen favor entering into a letter of intent. There are several problems with this approach beginning with whether or not they are meant to be binding. If one is drafted and actually signed, it should be expressly stated whether it is binding. A binding provision that the parties will negotiate exclusively for a defined period with each other can be made part of a letter of intent whose substantive provision are not binding.

The main difficulty with a letter of intent is that the deal makers tend to go onto other things after the letter is drafted and leave resolution of remaining issues to others, usually their lawyers. Notwithstanding best intentions, difficult points requiring substantial negotiation are often overlooked. When this is discovered, valuable momentum in the negotiating process is often lost. When areas of disagreement surface, positions taken in the letter of intent tend to be looked at by one of the other party is set in concrete. An attempt to modify them in subsequent negotiations as a compromise to resolving other points is looked upon as a bad faith negotiating ploy even if the letter of intent is not binding.

4. The actual deal maker should allow another member of the negotiating team to negotiate particularly touchy points. Most issues in negotiations are

subject to compromise. Nevertheless, sometimes the negotiators see the movement required for compromise as a retreat from a valid position and take the retreat as a personal defeat. Once the deal makers are at odds with each other, the chances of concluding a negotiation successfully are greatly reduced. If someone other than the deal maker takes the lead in delicate situations and personal feelings become a barrier to agreement, the deal maker who has avoided such conflict with its counterpart can step in to rescue the negotiators.

5. A third party participant may help negotiations. In Japan confrontation is avoided. American style negotiations are not the rule. Negotiations in Japan are, therefore, traditionally facilitated by a third party known to both sides. When a difficult point is reached, the third party acts like a diplomat and go between, between the parties to establish what each really wants and will suggest areas of compromise which can be reached outside the actual negotiations so that neither party loses face by advancing a position from which he must back away. Japanese trading companies traditionally play this kind of role.

#### Negotiating a Reasonable Royalty

Two elements of a license agreement loom larger than all the others in terms of importance. One is definition of the technology to be licensed and the other is how much is to be paid for it. Determining the royalty to be paid is more than each party proposing a royalty and compromising somewhere in between. Often one or the other of the parties only justification for a royalty proposal is how it compares to the actual royalties in other agreements or in the industry. While royalties in other agreements are relevant, always be prepared to justify the royalty proposed on as many other grounds as possible. Economic models can be helpful but their usefulness depends upon the acceptability to the other side of the assumptions on which they are based. One useful reference against which to test a royalty proposal, whether arrived at by intuition or economic model, is the checklist of elements used by courts in determining a reasonable royalty as a measure of damages in patent litigation. Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, (S.D.N.Y. 1970) modified and aff'd 446 F.2d 295 (2d Cir. 1971).

## CONCLUSION

Carefully and expertly controlled, programs as above set out can enhance not only the company's coffers but its image as well. In an ever-changing marketplace where technology is becoming more powerful every day, more and more companies are looking to capitalize on their technology assets through the use of creative technology transfer mechanisms.